




STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
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DOVER, DELAWARE 19903

JENNIFER COHAN
SECRETARY

MEMORANDUM

TO: Will Mobley, New Castle Subdivision Manager

FROM: Troy Brestel, Project Engineer 

DATE: February 11, 2019

SUBJECT: **Villages at Pine View (f.k.a. Kucharsey Property)**
Results of Traffic Operational Analysis Review

We have reviewed the traffic operational analysis (TOA) for the proposed Villages at Pine View (Tax Parcels 11-031.00-002 & 041) in New Castle County, prepared by The Traffic Group, Inc., (TTG) and dated October 2, 2018. The analysis evaluates the traffic impacts of the residential development, proposed to be located on Frazer Road in New Castle County. The proposed development would consist of 70 single-family detached houses and 102 townhouses. One full-movement access to the site would be located on Frazer Road. Construction is expected to be complete by 2023.

Based on our review, we find that the intersection of Frazer Road and Frenchtown Road would operate at lower than level of service (LOS) D during the a.m. peak hour for the future conditions, and would not meet the LOS criteria listed in Chapter 2 of the Development Coordination Manual. All other intersections and conditions analyzed operate at LOS D or better, and would meet the criteria listed in Chapter 2.

Should the developer choose to develop the property per the proposed land use listed above, we offer the following comments:

- 1) The developer should construct their site entrance on Frazer Road with a southbound left-turn lane of 310 feet (which includes a 100 foot taper) and a northbound right-turn lane of 195 feet (which includes a 50 foot taper) on Frazer Road. The need and lengths of the turn lanes are based off of DelDOT's *Auxiliary Lane Worksheet*, version 5.1, and is enclosed with this memorandum.

- 2) The developer should construct a single-lane roundabout at the intersection of Frazer Road and Frenchtown Road, pending a monetary contribution from DelDOT. The contribution from DelDOT should be the entire cost of the roundabout minus an agreed-upon contribution amount from the developer, which would be equal to the entire cost of installing a northbound right-turn lane at this intersection. The developer should coordinate with DelDOT's Development Coordination and Traffic Sections during the site plan review process on the details of the construction of the roundabout.
- 3) Should a roundabout prove infeasible to construct at the intersection of Frazer Road and Frenchtown Road, the developer would instead construct a northbound right-turn lane on Frazer Road. The developer should coordinate with DelDOT's Development Coordination and Traffic Sections during the site plan review process on the details of the construction of the right-turn lane.

Please note that this analysis generally focuses on capacity and level of service issues. Other comments relating to bicycle, pedestrian, and frontage improvements may be made during the plan review process. Level of Service tables for the existing and future cases are attached with this memorandum.

TB:km

Enclosures

cc: Joe Caloggero, The Traffic Group, Inc.
George Haggerty, New Castle County Department of Land Use
Owen Robatino, New Castle County Department of Lane Use
J. Marc Coté, Assistant Director, Development Coordination
T. William Brockenbrough, Jr., County Coordinator, Development Coordination
Matthew Vincent, Canal District Public Works Engineer, Canal District, DOTS
Vacant, New Castle Subdivision Coordinator, Development Coordination
Claudy Joinville, Project Engineer, Development Coordination

Table 1
PEAK HOUR LEVELS OF SERVICE (LOS)
Villages at Pine View – TOA
Prepared by The Traffic Group, Inc.

Unsignalized Intersection ¹	LOS per TOA		LOS per DelDOT	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
Frazer Road / Site Entrance				
2023 with development ²				
Westbound Site Entrance	A (9.5)	A (9.0)	C (15.6)	B (11.0)
Southbound Frazer Road Left-Turn	A (7.5)	A (7.5)	A (9.2)	A (8.1)

¹ The numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.

² DelDOT adjusted the through volumes along Frazer Road to correct the volume imbalance.

Table 2
PEAK HOUR LEVELS OF SERVICE (LOS)
Villages at Pine View – TOA
Prepared by The Traffic Group, Inc.

All-Way Stop-Controlled Intersection ¹	LOS per TOA		LOS per DelDOT	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
Frazer Road / Frenchtown Road				
2018 Existing	D (30.6)	B (11.0)	D (30.3)	B (11.1)
2023 without development	F (87.6)	B (13.2)	E (42.7)	B (13.4)
2023 with development	F (131.0)	C (16.0)	F (69.0)	C (16.4)
2023 with development- with improvement option 1 ²	N/A	N/A	D (34.9)	C (16.0)
2023 with development- with improvement option 2 ³	N/A	N/A	B (12.8)	A (6.6)

¹ The numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.

² Improvement option 1 includes the addition of a separate northbound right-turn lane along Frazer Road.

³ Improvement option 2 includes the installation of a single-lane roundabout at the intersection.

Table 3
PEAK HOUR LEVELS OF SERVICE (LOS)
Villages at Pine View – TOA
Prepared by The Traffic Group, Inc.

Signalized Intersection¹	LOS per TOA		LOS per DelDOT	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
Frazer Road / Montceau Drive / Church Entrance				
2018 Existing	C (23.3)	B (10.7)	C (23.3)	A (9.5)
2023 without development	D (43.6)	B (11.8)	C (29.8)	B (12.4)
2023 with development	D (49.3)	B (12.0)	C (30.8)	B (12.2)

¹ The numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.